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SUBJECT: ANGARSK INTERNATIONAL ENRICHMENT CENTER: MOVING  
FROM VIRTUAL TO ACTUAL

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Summary

1. (SBU) Development of the International Uranium Enrichment Center (IUEC) in Angarsk continues to move forward, though the center is still a "virtual" one to be carved out of the existing Angarsk Chemical Complex. Embassy was warmly received during a visit to the complex. Embassy toured the cascade hall, the central analytical laboratory, and LEU transport containers. IUEC senior management in Moscow confirmed that the Angarsk complex has ample excess enrichment capacity from which the IUEC can draw for its first few years. They admitted, however, that they need to do more work on the IUEC's business plan. Russian officials highlight the role they expect the IAEA to play in the center in providing safeguards and managing a fuel bank; they expect the IAEA to consider participation in the Angarsk IUEC at the March or June BOG. Armenia's entry into the Angarsk IUEC as an equity partner should add momentum to the project. The Angarsk IUEC project is consistent with U.S. non-proliferation goals, and according to Russian officials, is compatible with GNEP. End Summary.

Embassy Visits Angarsk

2. (SBU) The Angarsk Electrolysis Chemical Complex (AECC), 40 km from Irkutsk and in operation since 1957, is the home (or, more accurately, the home-to-be) for the International Uranium Enrichment Center (IUEC). The Angarsk complex produces uranium hexafluoride (UF<sub>6</sub>), enriching U-235 to a maximum of five percent, which is suitable for civilian uses only. EST Counselor and DOE Director visited the AECC in December. Rosatom Director Kiriyeenko personally approved the visit to the once-closed city. AECC management provided Embassy a tour of the complex that included stops in the centrifuge cascade hall, central analytical laboratory, the "Chelnok" facility where UF<sub>6</sub> is loaded into containers, and the Rosatom information center. As of January, delegations from only the IAEA, France, Kazakhstan and Ukraine had visited Angarsk to explore preparations for the International Center.

3. (SBU) Aleksandr Teterin, head of public relations for AECC, escorted Embassy officers throughout their stay in Angarsk. Teterin underlined AECC's commitment to support the development of the International Enrichment Center as it becomes operational. He made it clear, however, that TENEX -- manager for the project in Moscow -- is the source for all strategic and major operational decisions. Teterin recounted that the AECC complex is situated on six square kilometers of

land, and employs 6300-6400 personnel (down from about 12,000 in the late Soviet era). The average wage is 21,000 rubles/month (approx. \$857), high for the area. Rosatom opened an Information Center at AECC in March 2007 to improve public relations in the wake of the announcement of plans for the International Enrichment Center.

¶4. (SBU) Over the next ten years, Teterin affirmed, AECC hopes to double its enrichment capacity. The IUEC would play a significant part in that growth, assuming the concept meets with success. Teterin was reluctant to confirm how much spare capacity exists at present. Current capacity is estimated at about 2.6 million SWU. Rosatom officials have told us that a considerable amount of that capacity -- perhaps half -- is spare.

#### Organization

¶5. (SBU) The International Uranium Enrichment Center emerged as a joint venture between Kazakhstan's Kazatomprom and Russia's Techshabexport (TENEX) in September 2007. Kazakhstan acquired a 10% equity stake in the center. In early February, Armenia joined as an equity partner; its equity is also expected to be 10%. TENEX officials have told us that Ukraine might be the next equity partner. Presidents Putin and Yushchenko discussed Ukraine's participation the IUEC on February 12 in Moscow. TENEX officials stress that what differentiates the IUEC from a typical commercial enrichment enterprise is that it allows equity partners that do not currently have an enrichment capability the opportunity to realize economic profit from the center.

¶6. (SBU) The Director General of TENEX, Aleksey Grigoriev,

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serves as Director for the International Uranium Enrichment Center. The center will maintain offices in Angarsk and Moscow. The center's board will likely include government representatives from each equity partner. The IAEA, if it agrees to participate, would act in an advisory role. At this point, it appears that the center has no assets; each partner's investment is based on the promise of future center revenues.

#### Role of IAEA

¶7. (SBU) The International Center will operate as a black-box. TENEX Deputy DG Aleksey Lebedev underlined to us -- as the GOR's concept paper to the IAEA has made clear -- that government-to-government agreements required of each new partner stipulate that none will get access to enrichment technology. Lebedev told us negotiations regarding IAEA participation in the center had gone well. He expected the March or June IAEA Board of Governors meeting to consider the IAEA's role in the project.

¶8. (U) While in Moscow in December, IAEA DG ElBaradei commended Putin's initiative in establishing the IUEC at Angarsk. He noted: "The Agency has joined Russia in working to develop a proposal to set aside a fuel bank under IAEA control at Angarsk that would be available (to members) as a last resort. I trust this proposal will attract broad international support."

¶9. (SBU) Negotiations continue on the modalities and scope of possible IAEA safeguards. Lebedev told us TENEX was open to more intrusive activities by the IAEA at AECC, but that the IAEA was not interested. He explained that IAEA already has safeguards on an identical Russian-supplied facility in China and knows the operation well. IAEA safeguards at IUEC will thus target the center's storage areas, not the enrichment complex. Russia has agreed to pay IAEA for the cost of providing the safeguards.

## Two Reactor Loads in Reserve

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¶10. (SBU) Lebedev confirmed the IUEC would set aside a guaranteed uranium stock under IAEA supervision (if the IAEA approves) at the Angarsk facility. The stock, enough for up to two 1000-MW reactor core loads, would be a physical supply of uranium, not a virtual stock. It could be placed in an existing storage at Angarsk facility this year. Lebedev told us the stock would consist of varying enrichment assays to accommodate the requirements of various types of reactors. AECC's Teterin told us AECC had already set aside an area to house the reserve. The volume, he said, would amount to about one hundred containers of LEU.

## Business Plan

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¶11. (SBU) Lebedev expressed the hope that the center might be able to conclude initial contracts for uranium services with customers by the end of 2008. Nonetheless, he admitted that many issues remained to be worked out regarding how the IUEC would operate as a business. He expected that equity in the IUEC joint stock company would provide a guaranteed share of the dividends resulting from contracts and center operations.

Lebedev also surmised that the center, and therefore each partner, would likely have the opportunity to make an equity investment into the Angarsk Chemical Complex when it adds enrichment capacity. He speculated this might occur in 3-4 years, once existing capacity becomes insufficient to meet the combined requirements of the Angarsk plant and the IUEC.

¶12. (SBU) Lebedev stressed that Angarsk would phase in additional capacity so as not to harm the market, initially adding 300-400K SWU and ultimately ramping up to a total of one million additional SWU. He speculated that the IUEC might be allowed to own 10-15% of the new capacity. He pointed out that the transition of the AECC from a federal state unitary enterprise to a joint stock company (JSC) would need to be finalized before any outside investment could occur. Lebedev indicated that the plant's conversion to a JSC should be complete by mid-2008. This would also make the IUEC free from reliance on the state budget.

## Partners and Customers

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¶13. (SBU) Russia does not exclude the participation of fuel cycle states as partners in the center. However, the GOR's

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intent, Lebedev made clear, is for equity partners to be from those countries without enrichment capabilities, particularly those with uranium reserves of their own. The goal is to provide not only security of access to fuel supply for these countries, but also the additional incentive of offering ownership in an enrichment center without having to develop the capability indigenously. In addition to Kazakhstan and Armenia, the GOR has extended invitations to join the IUEC to Ukraine, Uzbekistan, South Korea, Australia, Mongolia, and Belarus. The center's customers would include those countries which have small nuclear power programs or those countries which have expressed interest in nuclear power, but lack domestic enrichment capabilities. Customers do not have to be equity partners.

## Iran

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¶14. (SBU) Iran remains a "potential client" if it were in compliance with its IAEA obligations, Lebedev said. He surmised that Russia's release of fuel for the Bushehr reactor might eventually make it easier for Iran to participate. To date, however, Iran had refused to meet the conditions the GOR had set out for participation: no indigenous enrichment and no technology transfer.

## Environmental Concerns

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¶15. (SBU) Angarsk's Teterin emphasized to us the safe environmental record of AECC. He claimed that only one tenth of one percent of the pollution in the Angarsk area came from AECC. Despite this, Teterin acknowledged that environmental groups had been vociferous in their protest of plans for the international enrichment center. Embassy met in Irkutsk with the head of the most prominent (and most critical) environmental NGO in the area, "Baikal Wave." She and her group strongly oppose the IUEC because plans for eventual expansion of the complex, spurred in part by IUEC, will result in the production of more depleted uranium hexafluoride waste at the AECC site. They fear an accident could poison Lake Baikal, only 100 km away and home to 20% of the earth's supply of fresh water (in addition to being a UNESCO world heritage site). Teterin said he is trying to reach out to the activists, but to no avail. Baikal Wave claims it is being harassed by the GOR.

No Back-end

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¶16. (SBU) TENEX officials have underlined to us that the IUEC concept does not, as currently envisioned, include guarantees on spent fuel reprocessing or return to Russia. The IUEC focus is on assured supply, not on the back-end. Angarsk is an enrichment facility, Lebedev noted, not a reprocessing facility.

Comment

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¶17. (SBU) The addition of Armenia as an equity partner should help spur IUEC development. A greater impetus will come if there is IAEA BOG approval for involvement in the project. The fact that the Angarsk Chemical Complex has excess enrichment capacity available now means the IUEC's move from virtual to actual can take place quickly once management works out the details of the business model. GOR officials welcome US interest in and support for the Angarsk IUEC, and proclaim its compatibility with GNEP. However, they have not solicited equity participation by US entities. The Angarsk IUEC project remains consistent with US non-proliferation and fuel security goals.

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